CLAIMS

1. A method of generating energy profiles for a specific task in a processing device executing multiple tasks, comprising the steps of:

receiving a first task identifier indicative of an active task in a processing component;

storing a second task identifier indicating a task to be monitored;

comparing the first and second task identifiers and generating a predetermined signal if the first and second task identifiers match;

measuring activity of certain devices responsive to said predetermined signal.

2. The method of claim 1 wherein said measuring step comprises the step of enabling one or more counters responsive to said predetermined signal.

3. The method of claim 1 and further comprising the step of updating an energy profile associated with the task to be monitored.

4. The method of claim 3 wherein said updating step comprises the step of updating an energy profile responsive to said measuring step during operation of said processing device.

5. The method of claim 4 and further comprising the step of executing a plurality of tasks in accordance with a scenario defining scheduling of said plurality of tasks and modifying said scenario responsive to said step of updating an energy profile.

6. The method of claim 1 and further comprising the step of performing a debugging operation responsive to said measuring step.

7. A processing device for multitasking multiple tasks comprising:

circuitry for receiving a first task identifier indicative of an active task in a

processing component;

a memory for storing a second task identifier indicating a task to be monitored;

a comparator for comparing the first and second task identifiers and generating a predetermined signal if the first and second task identifiers match;

circuitry for measuring activity of certain devices responsive to said predetermined signal.

8. The processing device of claim 7 wherein said measuring circuitry comprises the one or more counters that are enabled or disabled by to said predetermined signal.

9. The processing device of claim 7 wherein data from said circuitry for measuring activity updates an energy profile associated with the task to be monitored.

10. The processing device of claim 9 wherein said energy profile is updated during operation of said processing device.

11. The processing device of claim 10 wherein said plurality of tasks are executed in accordance with a scenario defining scheduling of said plurality of tasks and said scenario is updated responsive to said step of updating an energy profile.

12. The processing device of claim 7 and further comprising circuitry for implementing a debugging operation responsive to a value in said measuring circuitry.

13. A mobile communications device comprising:

an antenna for receiving and transmitting signals; and

receiver/transmitter circuitry coupled to said antenna for sending and receiving audio and data signals, said receiver/transmitter circuitry including a

processing circuit comprising:

circuitry for receiving a first task identifier indicative of an active task in a processing component;

a memory for storing a second task identifier indicating a task to be monitored;

a comparator for comparing the first and second task identifiers and generating a predetermined signal if the first and second task identifiers match;

circuitry for measuring activity of certain devices responsive to said predetermined signal.